Establishment of a Long-term Monitoring Program in Padilla Bay to Determine the Effectiveness of Chemical Controls in Returning Mudflat Habitat to Native Condition after *Spartina alterniflora* Removal

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Abstract

The unique ability of *Spartina* to alter mudflat habitats in Pacific Northwest estuaries raises the question of how sediment habitats are impacted over various temporal scales after *Spartina* removal. This study attempts to characterize habitat impacts of Spartina removal on Dike Island, in Padilla Bay, Washington, through monitoring of sediment dynamics at *Spartina alterniflora* eradication sites.

Monitoring of sediment dynamics using Surface Elevation Tables (SET) and feldspar marker horizons began in the summer of 2002, with the goal of establishing long term monitoring sites to research effectiveness of chemical controls in returning mudflat habitat to native conditions after Spartina removal. Ongoing research hopes to provide critical information in determining effectiveness of Spartina control methods and management objectives for Spartina removal in Padilla Bay and other estuaries in the Pacific Northwest.